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SEARCH REQUEST FORM

Reissue application

Requestor's Name: Marianne Padgett Serial Number: 09/187,551

Date: 5/11/99 Phone: 308-2336 Art Unit: 1762

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Litigation search for

U.S. PN. 5,571,571

SN 08/259,584

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308-4290

Date completed: 5/12/99
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SEL 8

SS 1 RESULT (1)

SS 2?
PRT FU

-1- (LEGSTAT)
PN - US 5571571 [US5571571]
DT - US-P
ACT - 94.06.14 US/AE-A
APPLICATION DATA (PATENT)
{US 259584/94 [94US-259584] 94.06.14}
ACT - 94.08.22 US/AS02
ASSIGNMENT OF ASSIGNOR'S INTEREST
APPLIED MATERIALS, INC. LEGAL AFFAIRS DEPARTMENT 3050 BOWERS AVENUE M/S #0934 SA * MUSAKA, KATSUYUKI : 19940810; MIZUNO, SHINZUKE : 19940725
ACT - 96.11.05 US/A
PATENT
ACT - 99.03.02 US/RF
REISSUE APPLICATION FILED
981105
UP - 9918

SS 2?

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SS 1?
NBR US5571571/PN

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12	1	US5571569/PN
13	1	US5571571/PN
14	1	US5571577/PN
15	1	US5571615/PN

UP N OR DOWN N?

SEL 13

SS 1 RESULT (1)

SS 2?
PRT FU

-1- (PAST)
AN - 9909-001269
PN - US5571571
DT - A (UTILITY)
OG - 99.03.02
CO - REA
ACT - REISSUE APPLICATION FILED
SH - REISSUE APPLICATION FILED

SS 2?

Dialog

File 345:Inpadoc/Fam.& Legal Stat 1999/UD=9917
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Set	Items	Description
S1	1	PN=US 5571571

? S PN=US 5571571

? T1/9/1

1/9/1
DIALOG(R)File 345:Inpadoc/Fam.& Legal Stat
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12226506
Basic Patent (No,Kind,Date): JP 7022316 A2 950124 <No. of Patents: 002>

PATENT FAMILY:
JAPAN (JP)
Patent (No,Kind,Date): JP 7022316 A2 950124
THIN FILM FORMATION OF SEMICONDUCTOR DEVICE (English)
Patent Assignee: APPLIED MATERIALS INC
Author (Inventor): MIZUNO SHINSUKE; MUTSUHIRA KATSUYUKI
Priority (No,Kind,Date): JP 93145070 A 930616
Applic (No,Kind,Date): JP 93145070 A 930616
IPC: * H01L-021/205
CA Abstract No: ; 123(06)072326S
Derwent WPI Acc No: ; C 95-095327
Language of Document: Japanese

UNITED STATES OF AMERICA (US)
Patent (No,Kind,Date): US 5571571 A 961105
METHOD OF FORMING A THIN FILM FOR A SEMICONDUCTOR DEVICE Method of forming a thin film for a semiconductor device (English)
Patent Assignee: APPLIED MATERIALS INC (US)
Author (Inventor): MUSAKA KATSUYUKI (JP); MIZUNO SHINZUKE (JP)
Priority (No,Kind,Date): US 259584 A 940614; JP 93145070 A 930616; US 184331 B2 940119
Applic (No,Kind,Date): US 259584 A 940614
National Class: * 427574000; 427563000; 427575000; 427579000
IPC: * H05H-001/02; H05H-001/30; H05H-001/24
CA Abstract No: * 123(06)072326S; 125(26)344926R; 125(26)344926R
Derwent WPI Acc No: * C 95-095327
Language of Document: English

UNITED STATES OF AMERICA (US)
Legal Status (No,Type,Date,Code,Text):

US 5571571	P	930616	US AA	PRIORITY (PATENT)
			JP 93145070	A 930616
US 5571571	P	940119	US AA	PRIORITY
			US 184331	B2 940119
US 5571571	P	940614	US AE	APPLICATION DATA (PATENT)
			(APPL. DATA (PATENT))	
			US 259584	A 940614
US 5571571	P	961105	US A	PATENT
US 5571571	P	990302	US RF	REISSUE APPLICATION FILED
			(REISSUE APPL. FILED)	
			981105	

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NAME	PG	DESCRIP
----------PATENTS----------		
ALL	4	UTIL,DESIGN,PLANT,SIR, REEXAM & REISS
UTIL	4	Full Text Patents from 1971*
DESIGN	4	Full Text Patents from 1976
PLANT	4	Full Text Patents from 1976
REEXAM	4	Reexamination Certificates
REISS	4	Reissue Patents
SIR	4	Defensive Publications
ASSIGN	4	Assignee
ABSTCL	4	Abstracts & Claims

* Selected coverage 1/15/71 to 12/3/74

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1 listing from all these database

LEVEL - 1 OF 1 PATENT

5,571,571

<=2> GET 1st DRAWING SHEET OF 9

Nov. 5, 1996

Method of forming a thin film for a semiconductor device

REISSUE: Reissue Application filed Nov. 5, 1998 (O.G. Mar. 2, 1999) Ex. Gp.: 1762; Re. S.N. 09/187,551

INVENTOR: Musaka, Katsuyuki, Sakae, Japan
Mizuno, Shinzuke, Narita, Japan

ASSIGNEE-AT-ISSUE: Applied Materials, Inc., Santa Clara, California (02)

APPL-NO: 259,584

FILED: Jun. 14, 1994

FOR-PRIOR:
Jun. 16, 1993 Japan 5-145070

REL-US-DATA:
Continuation-in-part of Ser. No. 184,331, Jan. 19, 1994 now abandoned

INT-CL: [6] H05H 1#02; H05H 1#30; H05H 1#24

US-CL: 427#574; 427#563; 427#575; 427#579; 438#784; 438#789;

CL: 427;438;

SEARCH-FLD: 427#563, 574, 578, 579, 575

REF-CITED:

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Abstract of JP63062238 from Patent Abstracts of Japan vol. 12, No. 285 (E-642) published Mar. 1988 to Tsunetoshi et al.

Webb et al, "Silicon Dioxide Films produced . . . " Oric, 2nd Int'l ULSI Conf. 1989 No month.
Yu et al "Step Coverage Study of PETEOS . . . " VMIC Conf. 1990 IEEE, Jun. 12-13, 1990.

PRIM-EXMR: Padgett, Marianne

LEGAL-REP: Morris; Birgit E.
Einschlag; Michael B.

CORE TERMS: silicon, film, oxide, gas, chamber, strip, plasma, fluorine, deposition, electrode, frequency, layer, aluminum, conductive, substrate, semiconductor, deposited, spacing, power source, width, graph, gases, voids, atomic, concentration, deposit, halogen, precursor, sidewall, ratio

ABST:
A method of forming conformal, high quality silicon oxide films that can be deposited over closely spaced, submicron lines and spaces without the formation of voids, comprises forming a plasma of TEOS and a selected halogen-containing gas in certain ratios. By proper control of the energy sources that create the plasma, the proper selection of the halogen-containing gas and selection of other processing parameters, high deposition rates can also be achieved.

NO-OF-CLAIMS: 10

EXMPL-CLAIM: <=20> 1

NO-OF-FIGURES: 34

NO-DRWNG-PP: 9

PARCASE: This application is a continuation-in-part of application Ser. No. 08/184,331 filed Jan. 19, 1994, now abandon, entitled "A METHOD OF FORMING A THIN FILM FOR A SEMICONDUCTOR DEVICE".

SUM:

The present invention relates to a method of forming a thin film for a semiconductor device. More particularly, this invention relates to a plasma-enhanced chemical vapor deposition (hereinafter PECVD) method for forming a silicon oxide thin film on a semiconductor substrate.

BACKGROUND OF THE INVENTION